CLAIMS

1. Method of making artificial dental bridges consisting of a ceramic densely sintered high strength individual core (B) with fired on porcelain (A) by powder metallurgical methods c h a r a c t e r i s e d in that the individual densely sintered bridge parts are joined to a bridge core with particle reinforced glass by a ONE step heat treatment.

2. Method according to claim 1 c h a r a c t e r i s e d in that the core material consists of high strength ceramic material with a relative density greater than 98%.

3. Method according to claim 1 c h a r a c t e r i s e d in that the ceramic core material consists of one or more of the oxides Al_2O_3, TiO_2, MgO, ZrO_2 or ZrO_2 with up to 10 mol% Y_2O_3, MgO or CaO.

4. Method according to claim 1 c h a r a c t e r i s e d in that the glass being used for joining has a surface energy at the joining temperature lower than the surface energy for the densely sintered core material.

5. Method according to claim 1 c h a r a c t e r i s e d in that the glass contains the same metal oxides as the core material in an amount that falls below the degree of saturation of the mentioned metal oxides in the glass at the joining temperature.

6. Method according to claim 1 c h a r a c t e r i s e d in that the glass has a coefficient of thermal expansion which is lower than or the same as the coefficient of thermal expansion of the densely sintered core material.

7. Method according to claim 1 c h a r a c t e r i s e d in that the glass contains the following main constituents: SiO_2 32 mol%, B_2O_3 24 mol%, Al_2O_3 18 mol% as well as La_2O_3 12 mol%.

8. Method according to claim 1 c h a r a c t e r i s e d in that the particles within the bridge unit are large enough such that drying stresses on removal of the solvent do not lead to catastrophic failure of the bridge unit prior to melting and solidification of the glass material.